

# Unmanned Aircraft Systems In the National Airspace System

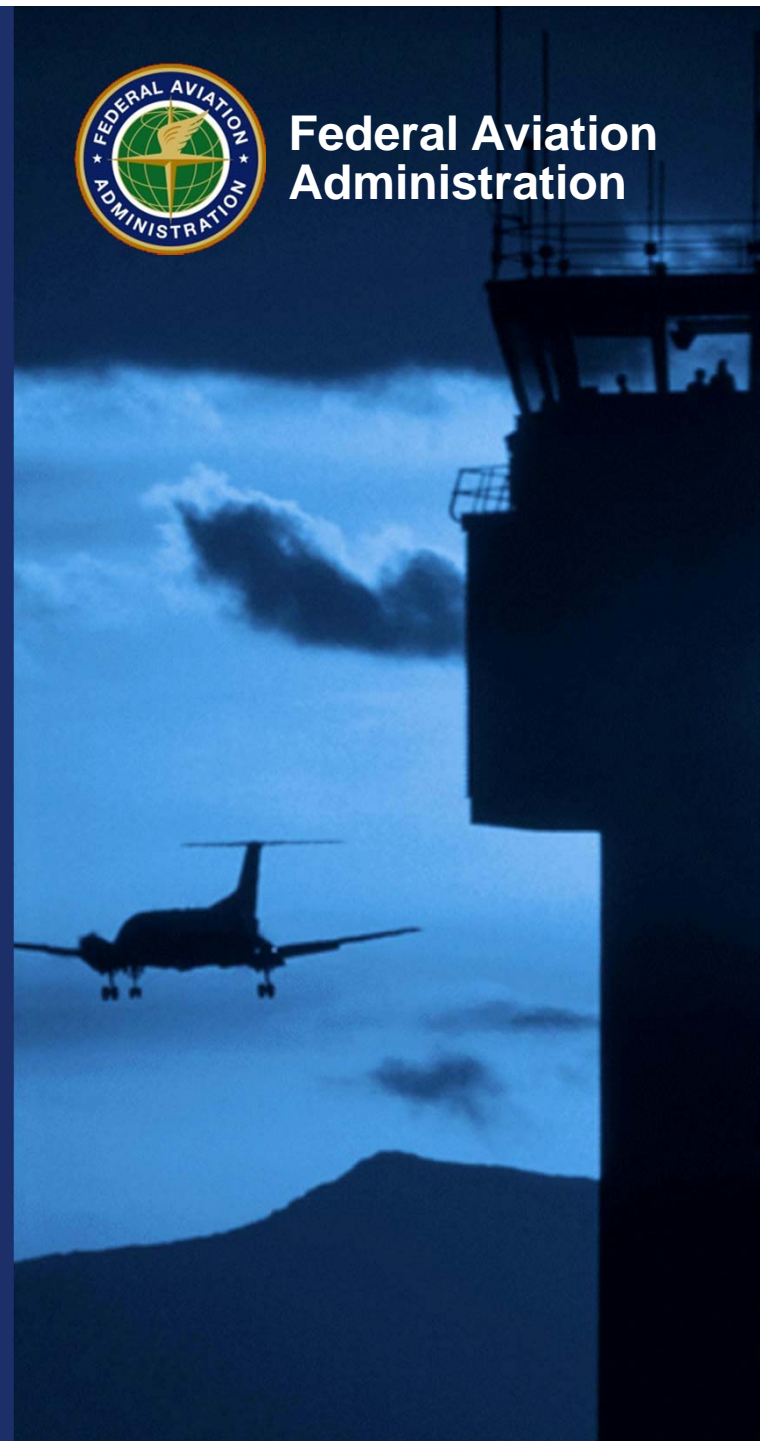
Presented to: FAA 27<sup>th</sup> Annual Great Lakes  
Region Airports Conference

By: Randy Willis, Air Traffic Control Specialist,  
FAA UAS Group

Date: November 3, 2011



Federal Aviation  
Administration

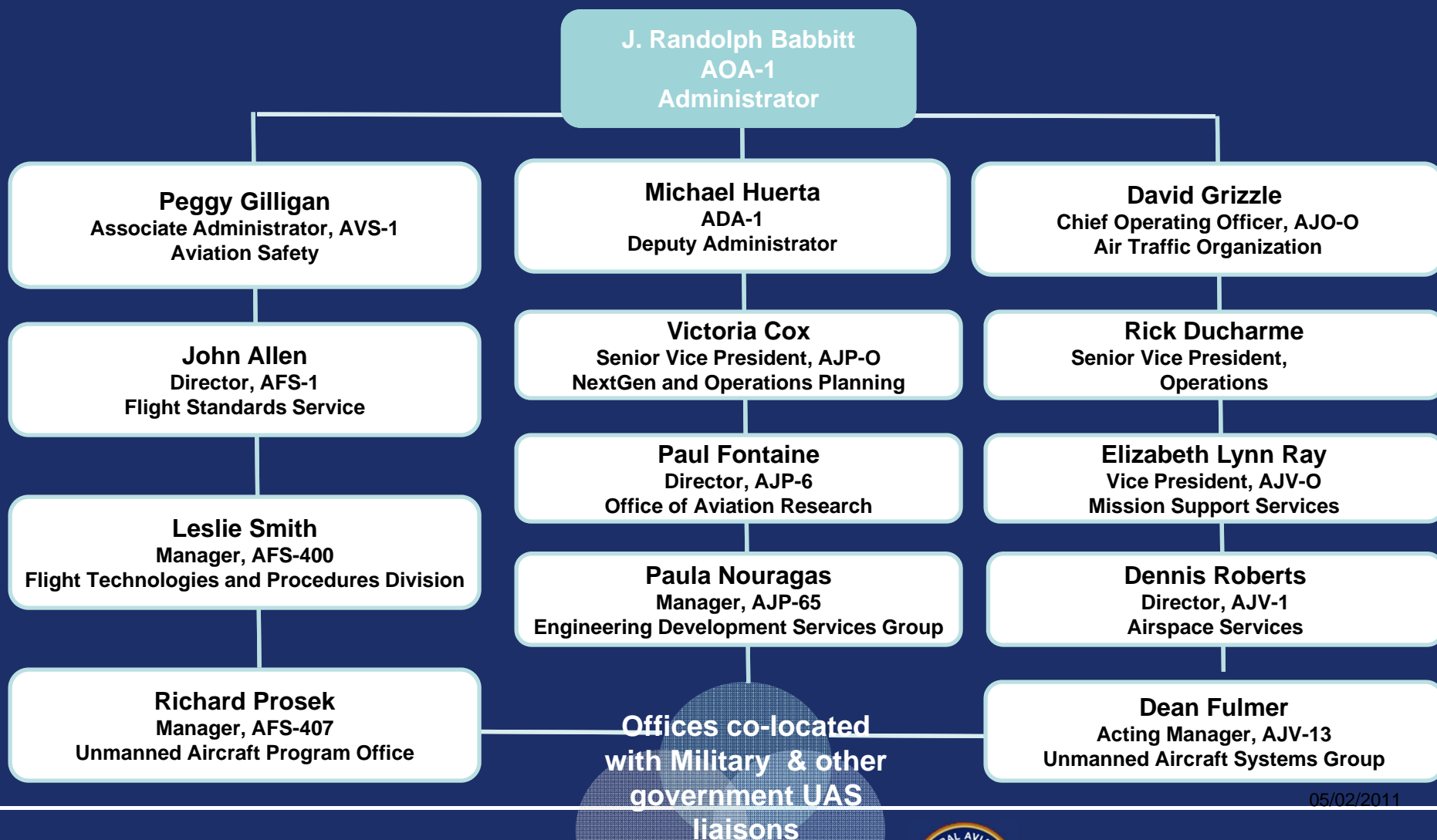


# Agenda

- FAA UAS Organization
- What is an Unmanned Aircraft System
- Who's flying
- Where can UAS fly
- How to get authorization to fly
- NAS Architecture
- COA Process
- Questions



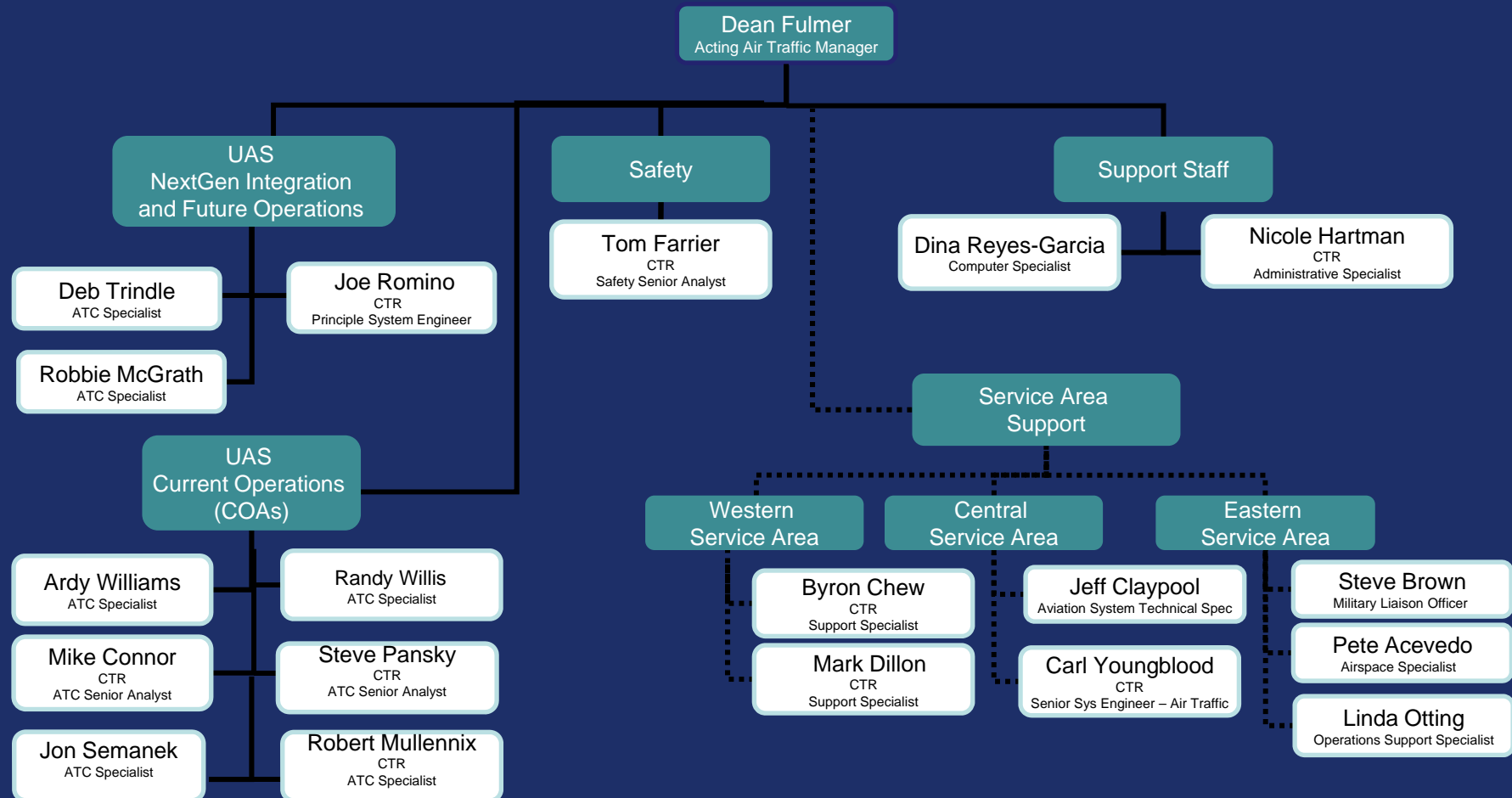
# Federal Aviation Administration



05/02/2011



# Air Traffic UAS Group



# What is an UAS

- Unmanned Aircraft: A device used or intended to be used for flight in the air that has no onboard pilot
- System Includes:
  - Unmanned Aircraft (UA)
  - Aircraft Control Station
  - Command & Control Link/s



# The System





# What do they look like?



# What do they look like?





# From the inside



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# From the inside



# Who's Flying

## Public Use Aircraft

- Department of Agriculture
- Department of Commerce
- Department of Defense
- Department of Energy
- Department of Homeland Security
- Department of Interior
- Department of Justice
- NASA
- State Universities
- Federal/State/Local Law Enforcement

## Civil Aircraft – Special Airworthiness Certificates – Experimental

- **AAI Corporation**
- **General Atomics**



# Where: Airspace

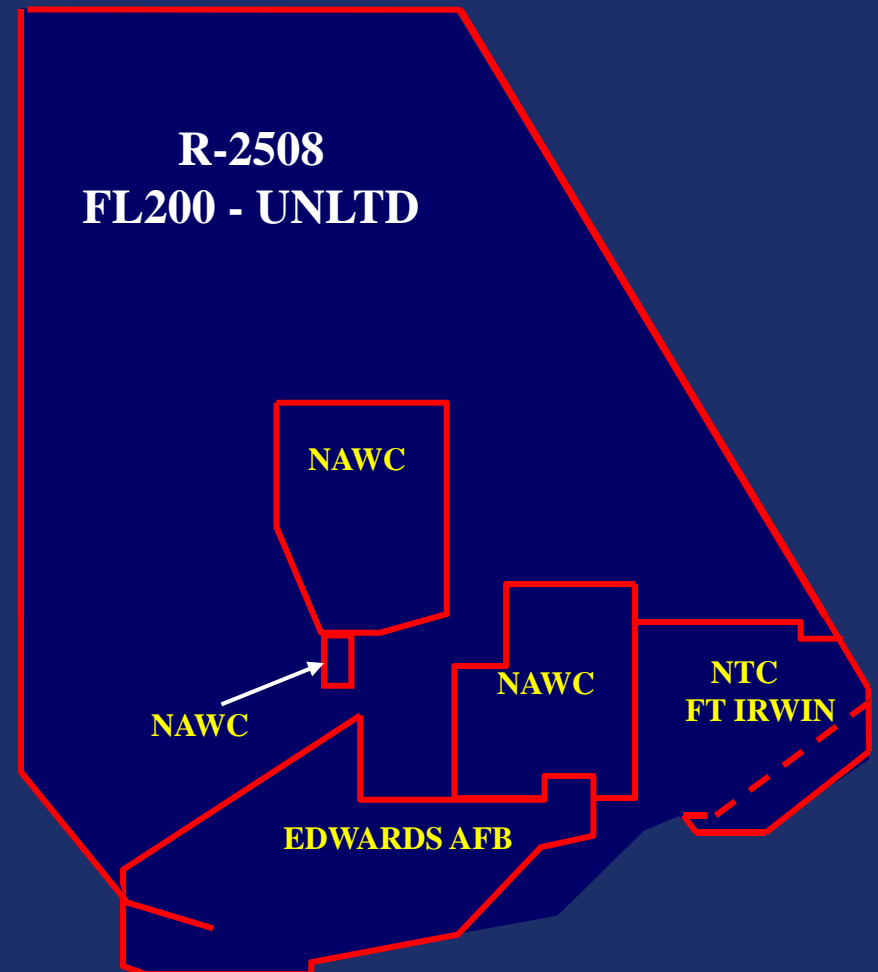
- Restricted Areas
- Warning Areas
- Prohibited Areas
- Rest of the National Airspace System
- Flight Information Regions

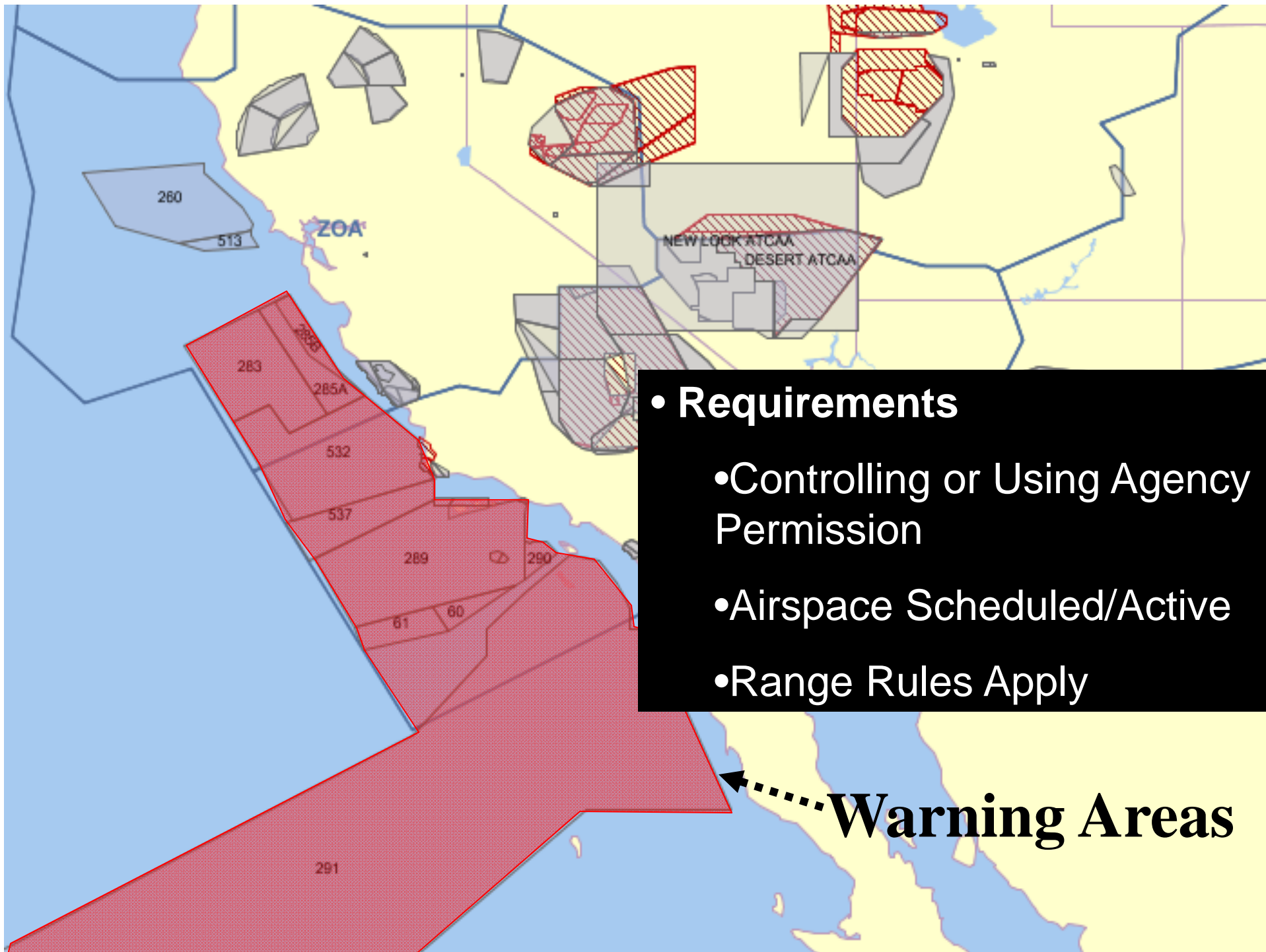




# Restricted Areas

- **Requirements**
  - Controlling or Using Agency Permission
  - Airspace Scheduled/Active
  - Range Rules Apply



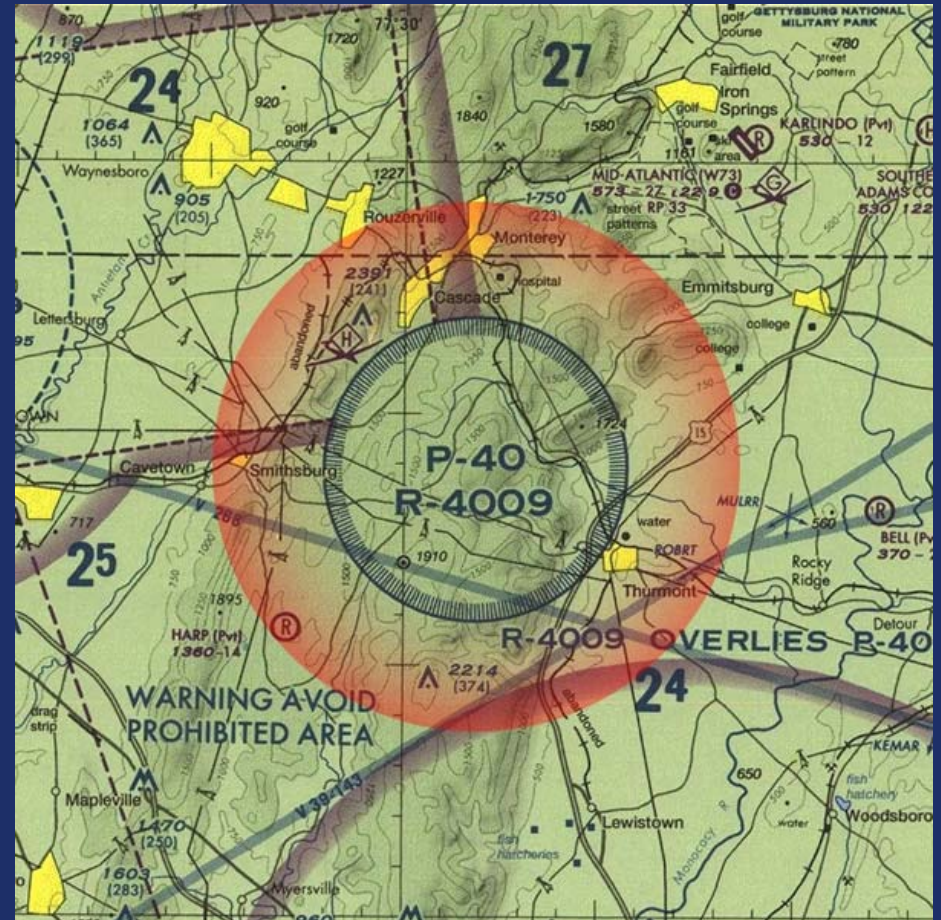


# Prohibited Area

# National Security and Welfare

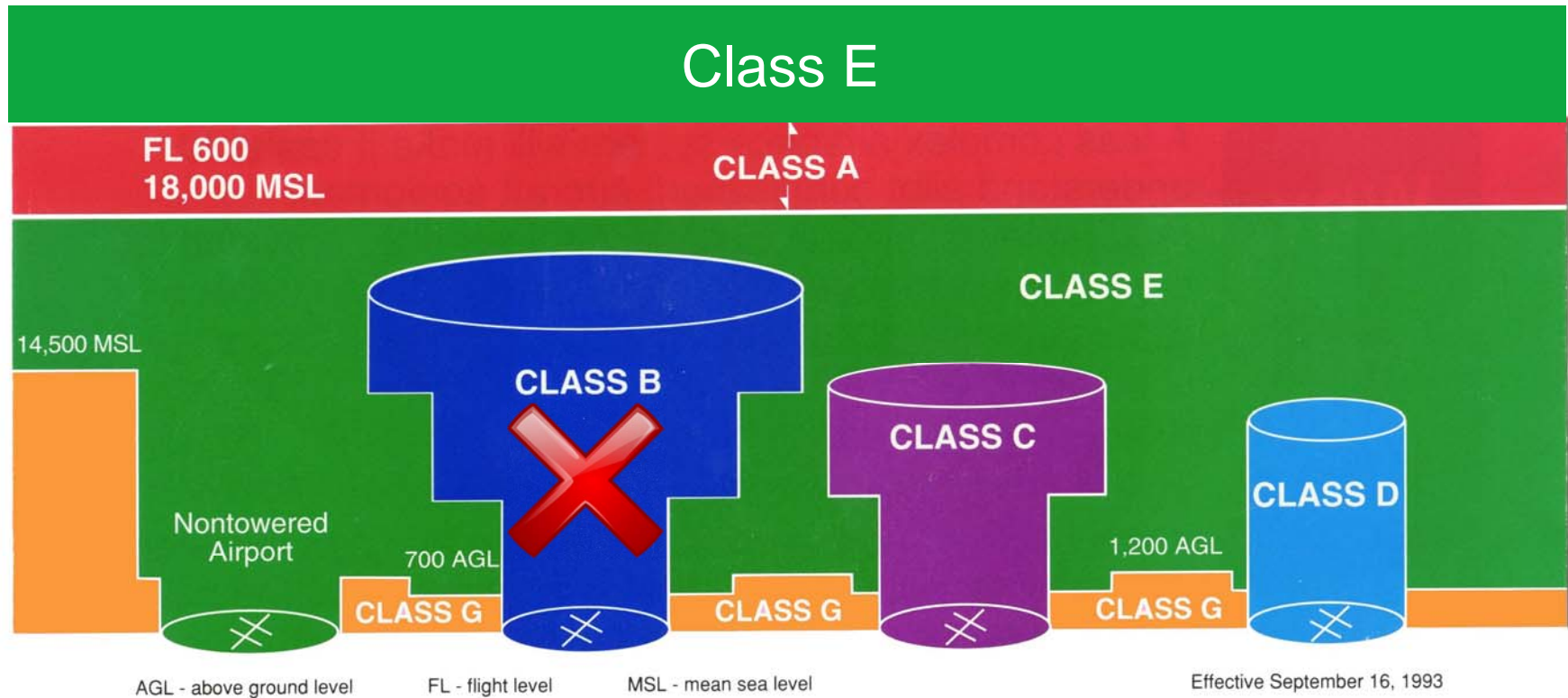
## FAA Administrator or USSS Permission Required

**Note: Not normally approved for aviation**



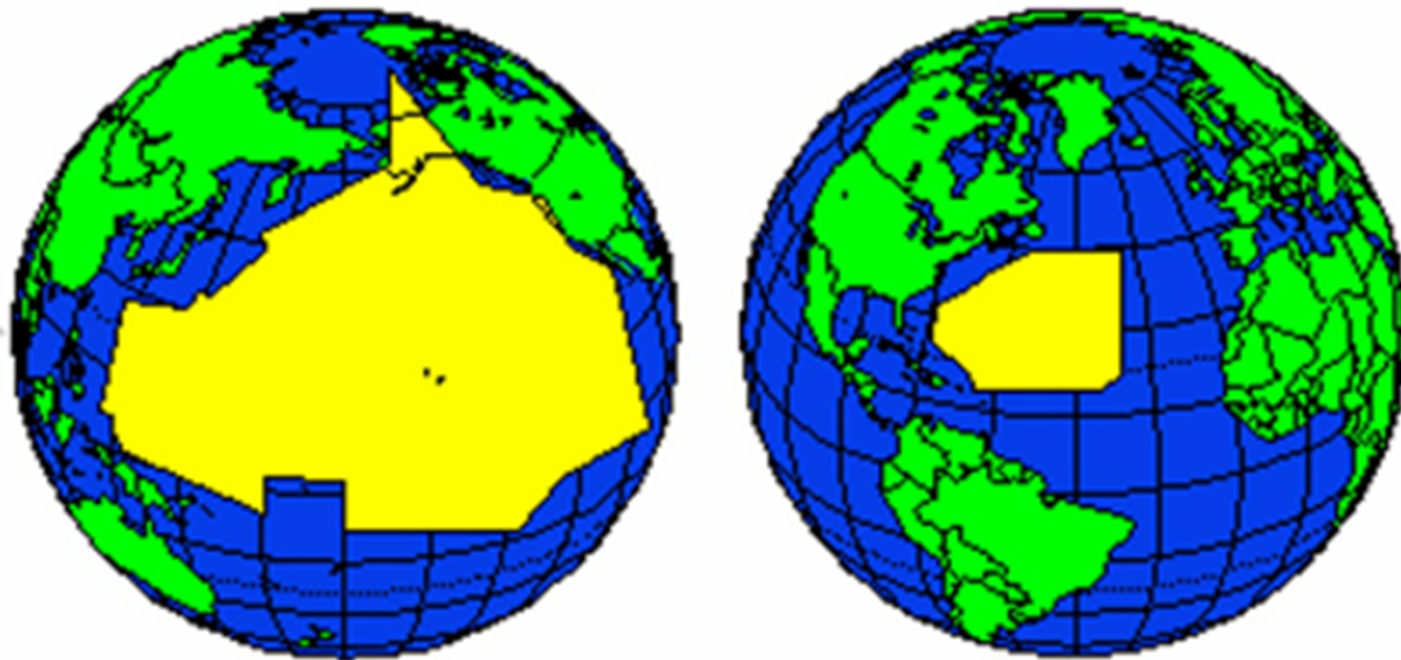


# National Airspace System





# Flight Information Region



24 Million Square Miles

# How: Authorization to Fly

- Certificate of Waiver or Authorization (COA)
  - Public Entities (government)
  - Public Agency determines air worthiness
  - Year long flight plan
- Special Airworthiness Certificate
  - Non-public
  - FAA issues air worthiness certificate



# Certificate of Waiver or Authorization (COA)

- FAA Form 7711-1
- Authorization to operate UAS in the NAS
- We do not release/discuss with others
- Consists of 5 sets of provisions:
  - General
  - Safety
  - Standard
  - Special (Airspace and ATC)
  - Reporting Requirements






# COA Process





# Background



Unmanned Aircraft System (UAS) Certificate of Waiver or Authorization (COA) is reserved for all UAS flight outside of active restricted and warning area airspace. The authorization is issued by the Air Traffic Organization (ATO) to a public operator for a specific unmanned aircraft (UA) activity. After a complete application is submitted, the Federal Aviation Administration (FAA) conducts a comprehensive operational, technical, and safety review. If necessary, provisions or limitations may be imposed as part of the approval to ensure the UA can operate safely with other airspace users. In most cases, the FAA will provide a formal response within 60 working days from the time a completed application is submitted.

To better support the needs of our customers, the FAA deployed a Web-based application system. The UAS COA Online System provides applicants with an electronic method of requesting a COA.

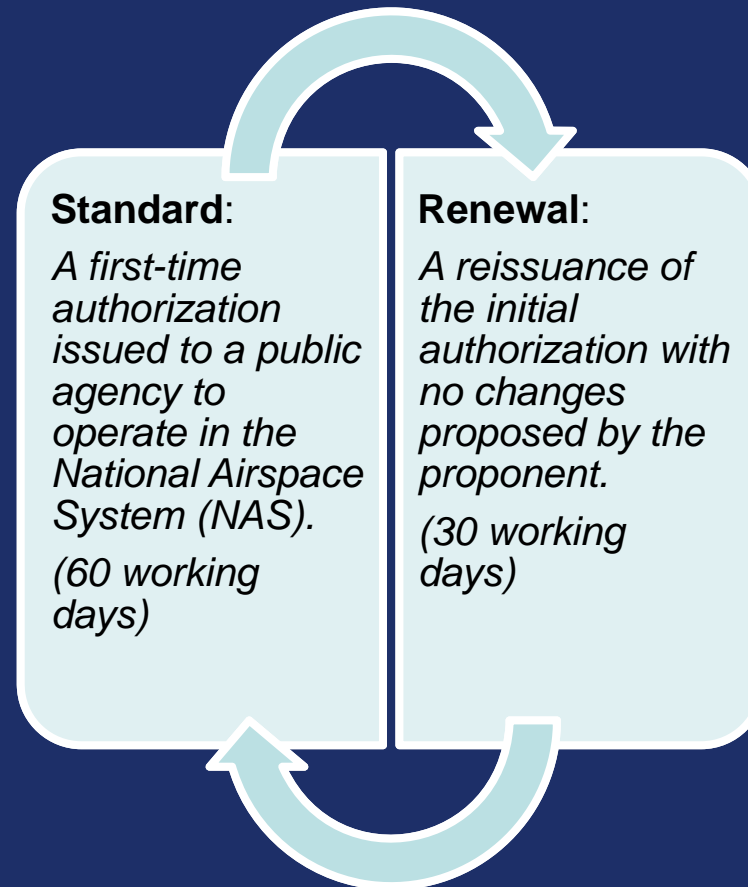
Reference:

FAA Order JO 7610.4, Special Operations

FAA Order JO 7210.3, Facility Operations and Administration

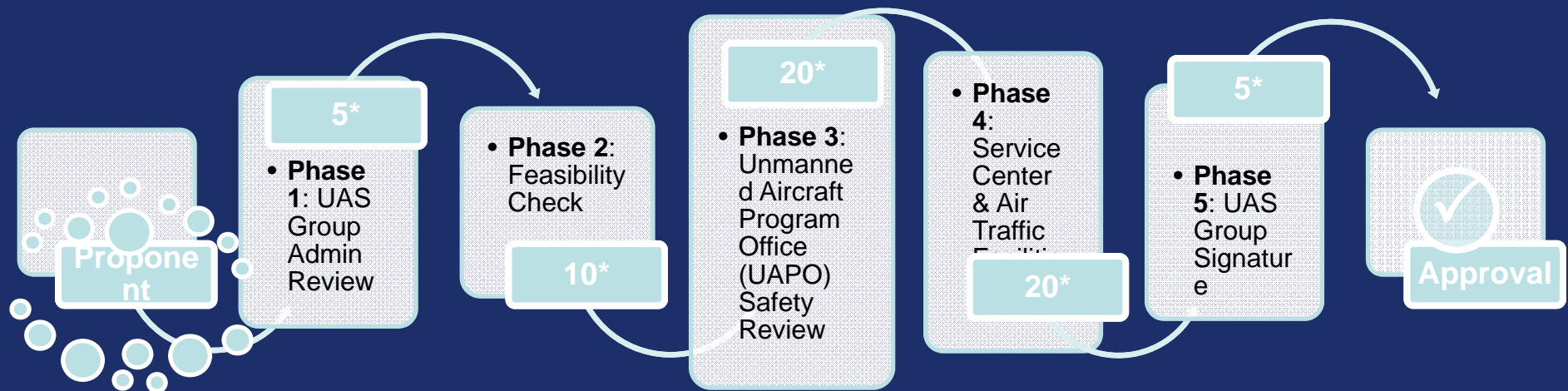


# COA Types



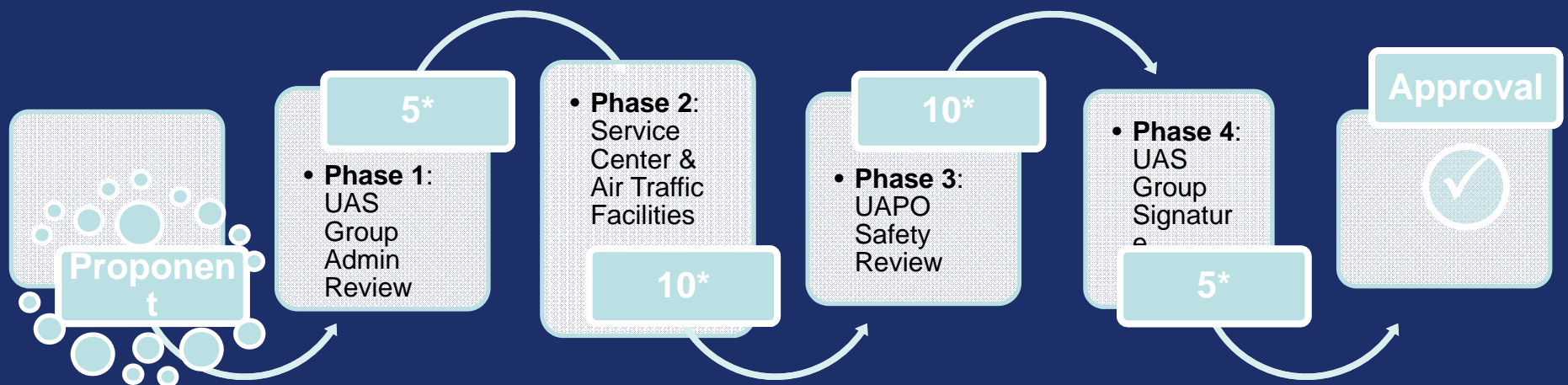
# COA Process - Standard

## COA Process - Standard



\*Working days

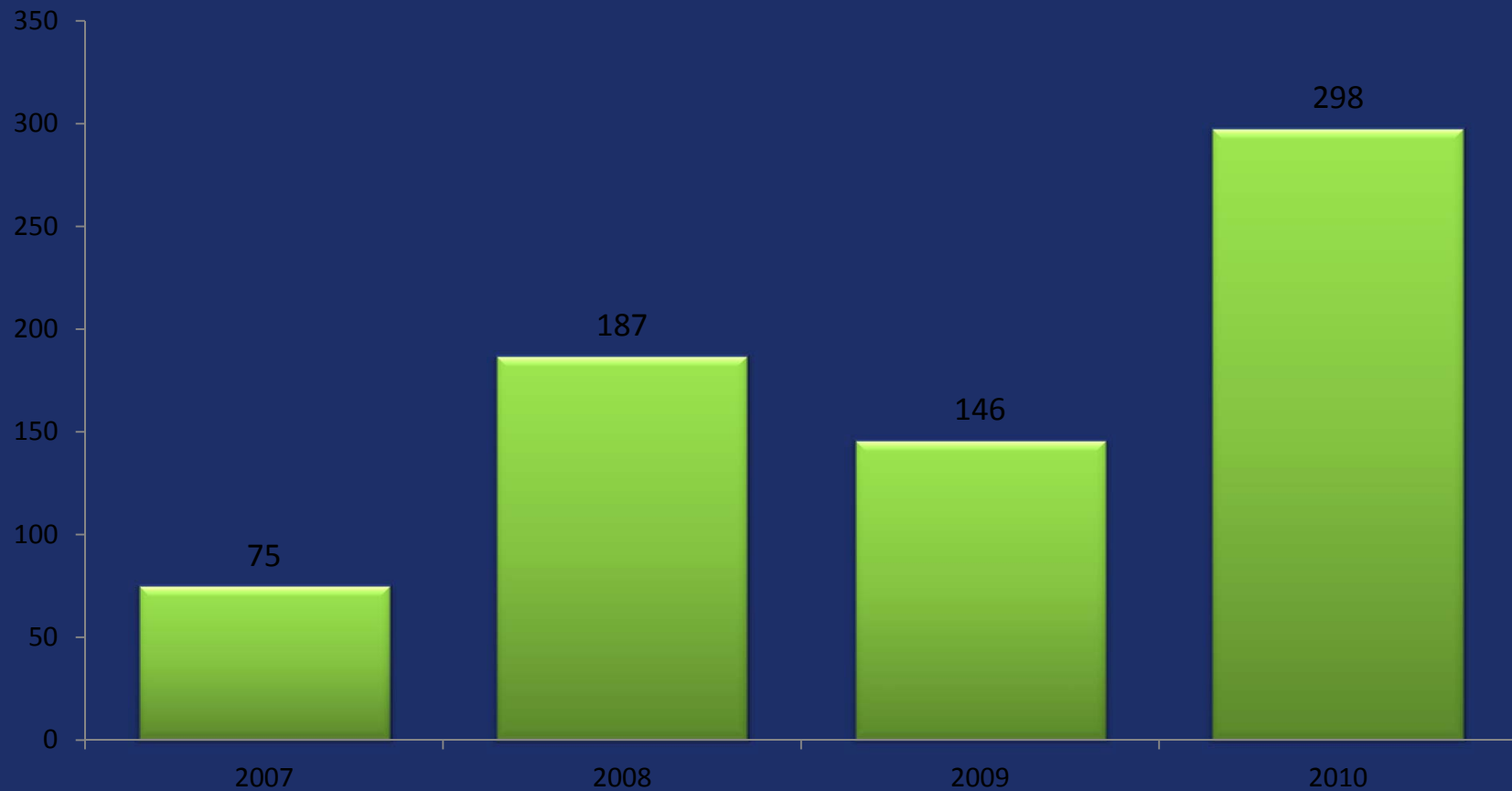
# COA Process - Renewal



\*Working days



# COAs Approved



SEP 2011



# COAs Currently Active



Approved = 294



Pending = 140

9/1/2011



# FAA Headquarters Air Traffic POC's

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# Questions?

